

6061-T6 T.375 X.058W

Work Order ID 93285

November-15-12 10:48:05 AM

Item ID: D3903-1

Revision ID:

Item Name: Spacer

Start Date: 11/12/12 Start Qty: 50.00

Accept

93285

Required Date: 11/30/12 Req'd Qty: 50.00

50

50

N900040100

Setup Start *NS1*

Stop *NS2*

Reference:

Approvals:

Process Plan: M5

Date: 12-11-15

Tooling: _____

Date: _____

Run Start *NR1*

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3903	B								
100		0.00							
100									
Hardinge	Memo	0.00							
Hardinge CNC Lathe Small	I-TURN AS PER FOLIO FA813 & DWG D3903, FOLIO REV: AA DWG REV: B								
	2-DEBURR AS REQUIRED								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									

12/12/03 170 Ø

12/12/03 170 Ø

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No. _____		Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____		Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
		Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
		Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear				General						
				Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>		
Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>						
Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>						
Crushed/Crimped. <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>						
Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>							
Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>							
Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>						
Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>								
Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>								
Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>								
Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>								

Work Order ID 93285

93285

Page 2

November-15-12 10:48:05 AM

Item ID: D3903-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Spacer

Stop

NS2

Start Date: 11/12/12 Start Qty: 50.00

50

Cust Item ID:

Required Date: 11/30/12 Req'd Qty: 50.00

50

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC8- Inspect parts - second check

0.00

2-2-3

100

(DAS)
04
9-89

120

QC

Quality Control

130

Identify as per dwg & Stock Location: LG

0.00

130

Packaging

Packaging

0.00

170 0 3/12-12-20

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Quality Control

0.00

13/1/10 80

ME

12-12-27

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No. _____		Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____		Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
		Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
		Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear				General						
				<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Pressure/Forced		
				<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Temperature/Cure		
				<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Weld		
				<input type="checkbox"/> Crushed/Crimped.	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Wrong Stock Pulled		
				<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved			
				<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong			
				<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge			
				<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset				
				<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration				
				<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence				
				<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions				

Picklist Print

November-15-12 10:48:04 AM

Page 1

Work Order ID: 93285

Parent Item: D3903-1

Parent Item Name: Spacer

Start Date: 11/12/12

Required Date: 11/30/12

Start Qty: 50.00

Required Qty: 50.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6T0.375W.058 6061-T6 RD Tube .375 x.058W		Purchased	No			100	f	258.4660	0.345	18,157895 61.833'			12/12/03

Location	Loc Qty	Loc Code
MAT014	258.466	
116920	0.578	
119087	0.055	
123303	5.833	1.833'
123449	252	
123844		60.000'

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. _____	Work Order:	Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. _____	Part No. _____	NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
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Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear				General						
				Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>		
				Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>		
				Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>		
				Crushed/Crimped. <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>		
				Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>			
				Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>			
				Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>			
				Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>		Other <input type="checkbox"/>		
				Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>				
Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>								
Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>								

DART AEROSPACE LTD	Work Order:	93 285
Description: <u>Spacer</u>	Part Number:	D 3903-1
Inspection Dwg:	Rev:	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Measured by:	<i>SL</i>	Audited by:	<i>04 9</i>	Preliminary Approval:	
Date:	12/12/03	Date:	2-2-3	Date:	

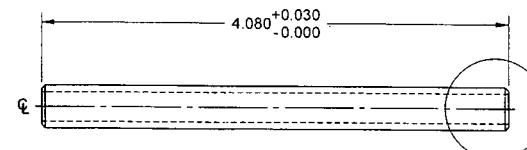
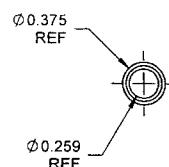
Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

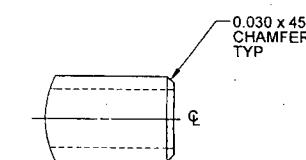
8 7 6 5 4 3 2 1

D

D



B2-1
DETAIL A



DETAIL A C3-1
SCALE 2X

SPACER
DRAFT
UNCOATED
SUBSTITUTE
SUBJECT TO APPROVAL
WITHDRAWN
WITH ORDER
NO. 93285ML5
12-11-15

D3903-1 SPACER

RELEASED
12/07/2015

A NOTES:

- 1) MATERIAL: 6061-T6 OR 6061-T62 ALUMINUM SEAMLESS TUBING 0.375" OD x 0.058" WALL PER WW-T-700/6 OR AMS 4080 OR AMS 4082 OR QQ-A-200/8 OR QQ-A-225/8 OR ASTM B210 OR ASTM B241 (REF DART SPEC. M6061T0.313W.058)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

B	CORRECT TYP0 Ø0.375 WAS Ø0.313 (ZN A6-1)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3903	SHEET 1 OF 1
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	SPACER	NTS
DATE	09.06.30	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1